

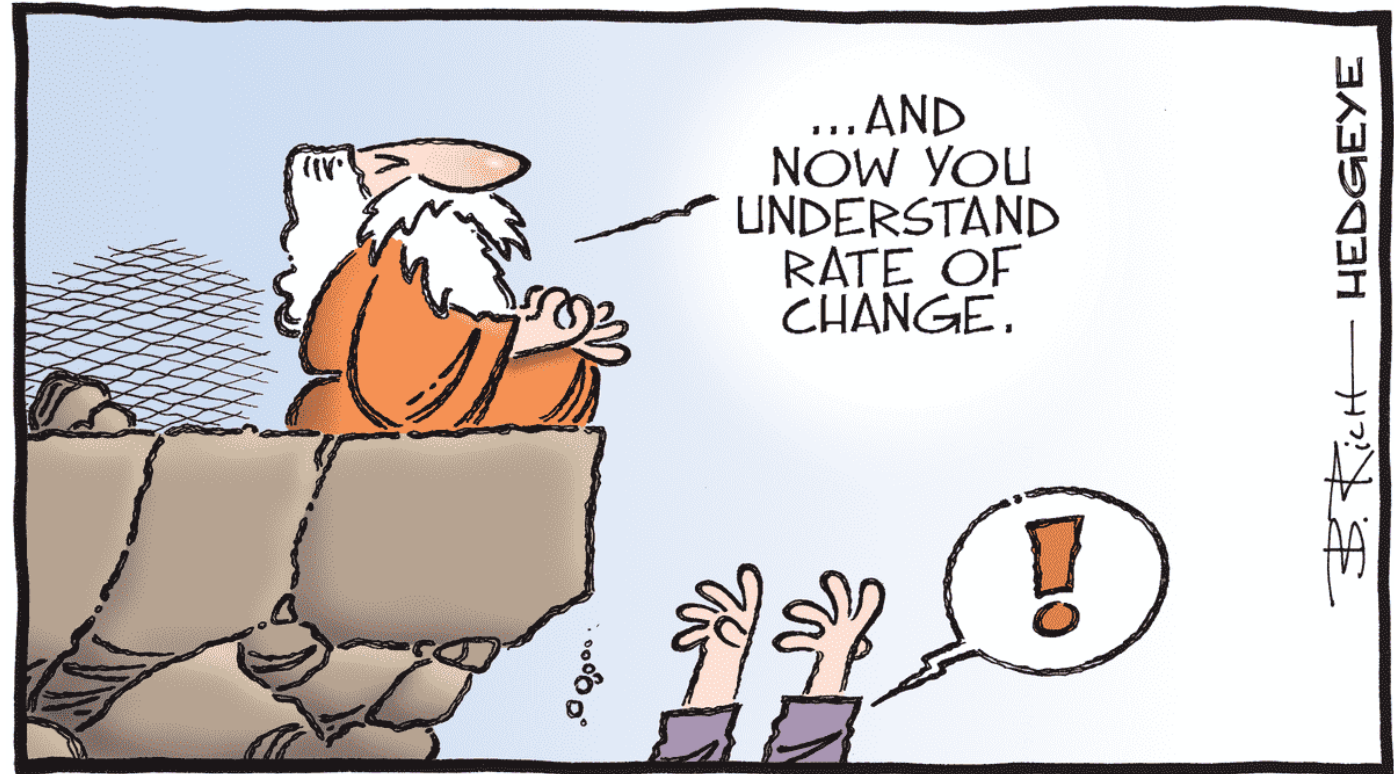
HEDGEYE



# HEDGEYE'S CURRENT MARKET OUTLOOK

THE SHALLOW END

March 5, 2024



## MACRO

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## Narrow Quad 4 to Potential/Outright Quad 1

While the tough comp setup did provide for a RoC deceleration in January, the dampened magnitude of that deceleration, particularly after adjusting for the impact of weather and the reacceleration in spending during the final week of January, probabilistically points to a sustaining of the high rate of exit momentum out of 4Q23. Notwithstanding broader inflation risks, the economic landscape suggests a potential shift towards a more typical cycle, with wage growth now surpassing inflation, indicating positive real income growth. With Manufacturing activity stabilizing, continued resilience characterizing the Services economy, Residential Investment no longer a net drag and the prospects for further large-scale (pre-election) fiscal support remaining elevated, the outlook for 1Q24, and increasingly likely for 1H24, is that it will be colored by the same exit strength of 2023 with the most probable regime characterization being shallow Quad 4 or narrow Quad 1, the market implications of which both have the same bullish leanings.

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## Big (G): Deficits & Debt Updated

Government spending growth accelerated in each of the last four quarters, coming in at a brisk +4.9% Y/Y rate in Q3 based on the final revision (up from the already-hot earlier estimate of +4.5%). In the last two quarters, it has grown at more than twice the rate of personal consumption expenditures. Despite it being a) an election year and b) a year with uncapped commitments to green energy spending, total government spending's contribution to GDP growth in 2024 will face among the steepest comps in years. We'll review the setup here quarter-by-quarter looking out across 2024.

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## Long India and Gold vs. Short Japan

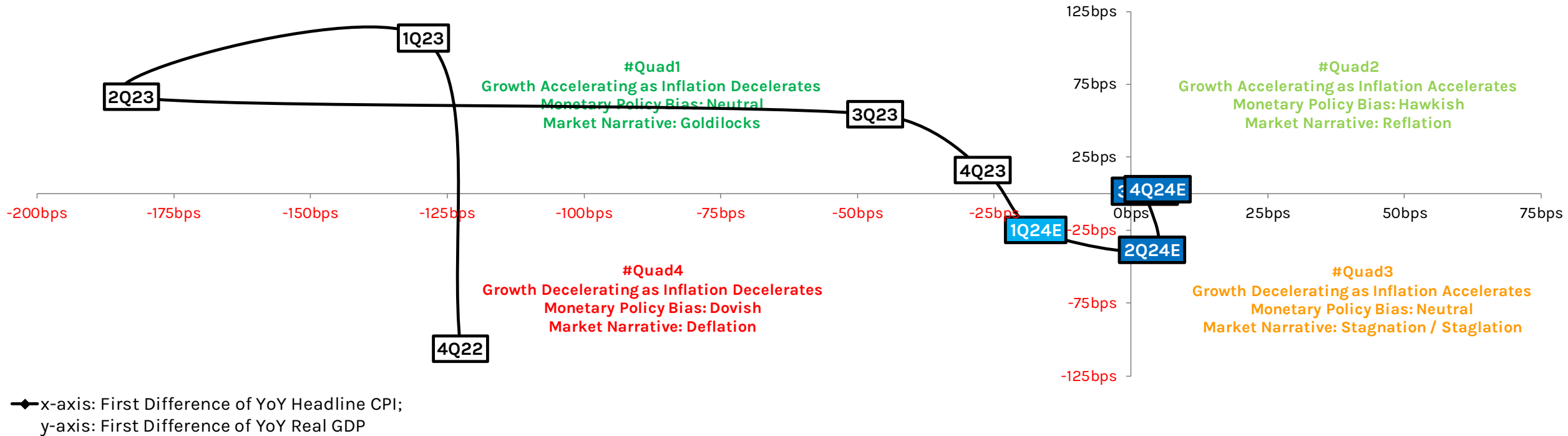
The signal remains bullish on India as shallow decelerations are overlooked for the shine and "relative" acceleration of its world-leading economic growth powered by buoyant domestic demand and government spending, moderated commodity prices, and strong credit growth. Meanwhile, real yields down, gold up, with the added long-term secular tailwind of fiat debasement and real asset supremacy in the age of fiscally drunk sovereigns. We expect real yields to experience downside pressure from the two most probable outcomes: nominal yield declines on slowing growth or a reacceleration in inflation due to a premature Fed pivot into easy comps. Lastly, Japan is past its peak with returns from accommodative monetary policy, a weaker yen, and heightened external demand due to exports and the wave of post-pandemic tourism diminishing. Accordingly, Japan is poised for back-to-back Quad 4s through 1H24.

# What Are The Quads?

Our GIP Model is a quantitatively oriented, regime-based framework that helps investors proactively prepare for volatility phase transitions within and across asset classes by triangulating the three factors that matter most to Macro Risk Management – i.e. GROWTH, INFLATION, and POLICY.

United States	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	← Actuals   Estimates →	1Q24E	2Q24E	3Q24E	4Q24E
Real GDP QoQ SAAR	5.20%	6.20%	3.30%	7.00%	-2.00%	-0.60%	2.70%	2.60%	2.20%	2.10%	4.90%	3.20%	Real GDP QoQ SAAR	1.20%	0.54%	4.93%	3.40%
Real GDP YoY	1.57%	11.95%	4.74%	5.42%	3.57%	1.87%	1.71%	0.65%	1.72%	2.38%	2.93%	3.09%	Real GDP YoY	2.84%	2.46%	2.47%	2.50%
2yr Comparative Base Effects	1.54%	-2.69%	0.60%	1.05%	1.40%	2.21%	1.63%	2.17%	2.57%	6.91%	3.22%	3.04%	2yr Comparative Base Effects	2.64%	2.13%	2.32%	1.87%
Headline CPI YoY	1.90%	4.85%	5.34%	6.69%	7.96%	8.63%	8.33%	7.10%	5.81%	3.98%	3.51%	3.24%	Headline CPI YoY	3.07%	3.11%	3.13%	3.18%
2yr Comparative Base Effects	1.88%	1.09%	1.49%	1.64%	2.01%	2.61%	3.28%	3.96%	4.93%	6.74%	6.83%	6.90%	2yr Comparative Base Effects	6.89%	6.31%	5.92%	5.17%

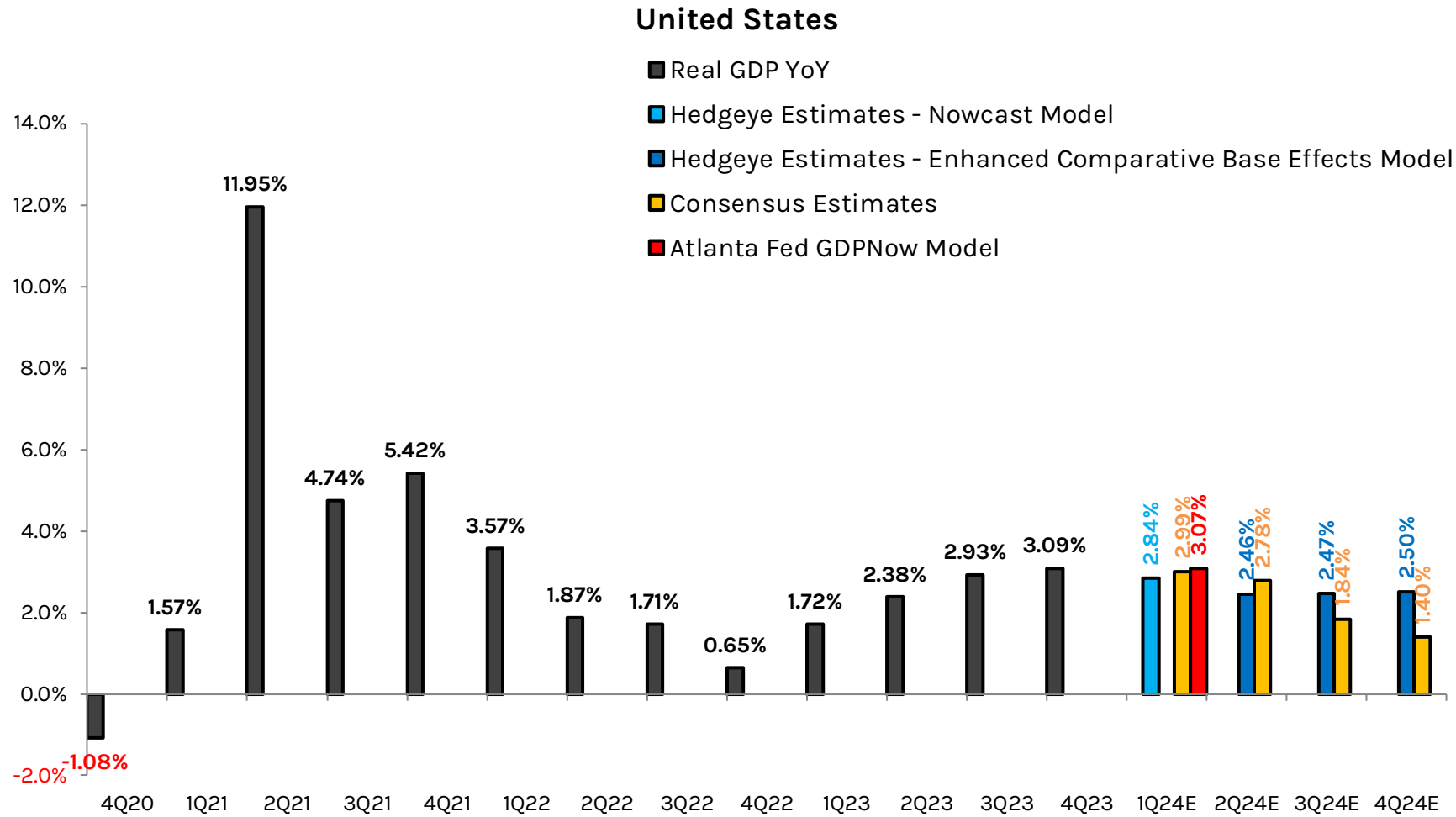
## United States



Data Source: BEA, BLS Light Blue box = Hedgeye Nowcast Model estimate. Dark Blue boxes = Hedgeye Comparative Base Effects Model estimates.

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# US Real GDP YoY Projections



Data Source: BLS, BEA, Atlanta Fed, FactSet

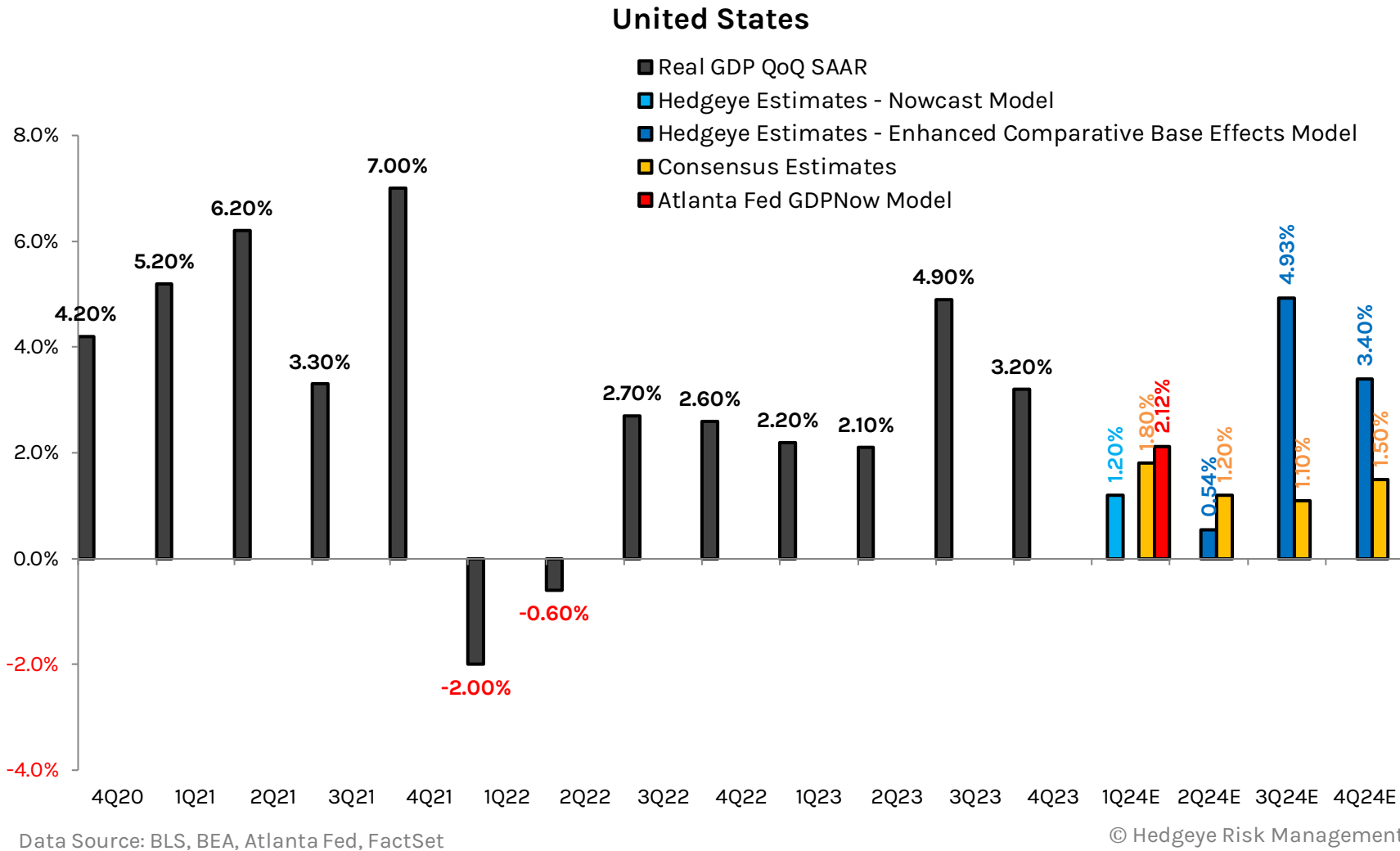
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We use two distinct models to forecast the YoY growth rate of Real GDP and the combination of the two allows us to develop both a highly accurate real-time assessment of near-term economic momentum, as well as a high-probability scenario for where growth is likely to trend over the NTM.

Intra-quarter, we employ a stochastic nowcasting framework that anchors on nonlinear interpolation to relay rate of change signals from the individual features of the dynamic factor model to the base rate. In out-quarters where high-frequency data has yet to be reported, we employ a Bayesian Inference process that adjusts each of the preceding forecasted base rates inversely and proportionally to changes in the base effects.

**All told, our US GDP nowcast model has an average absolute forecast error of 55bps and an 85% success rate in terms of accurately projecting the rate of change of GROWTH.**

# US Real GDP QoQ SAAR Projections

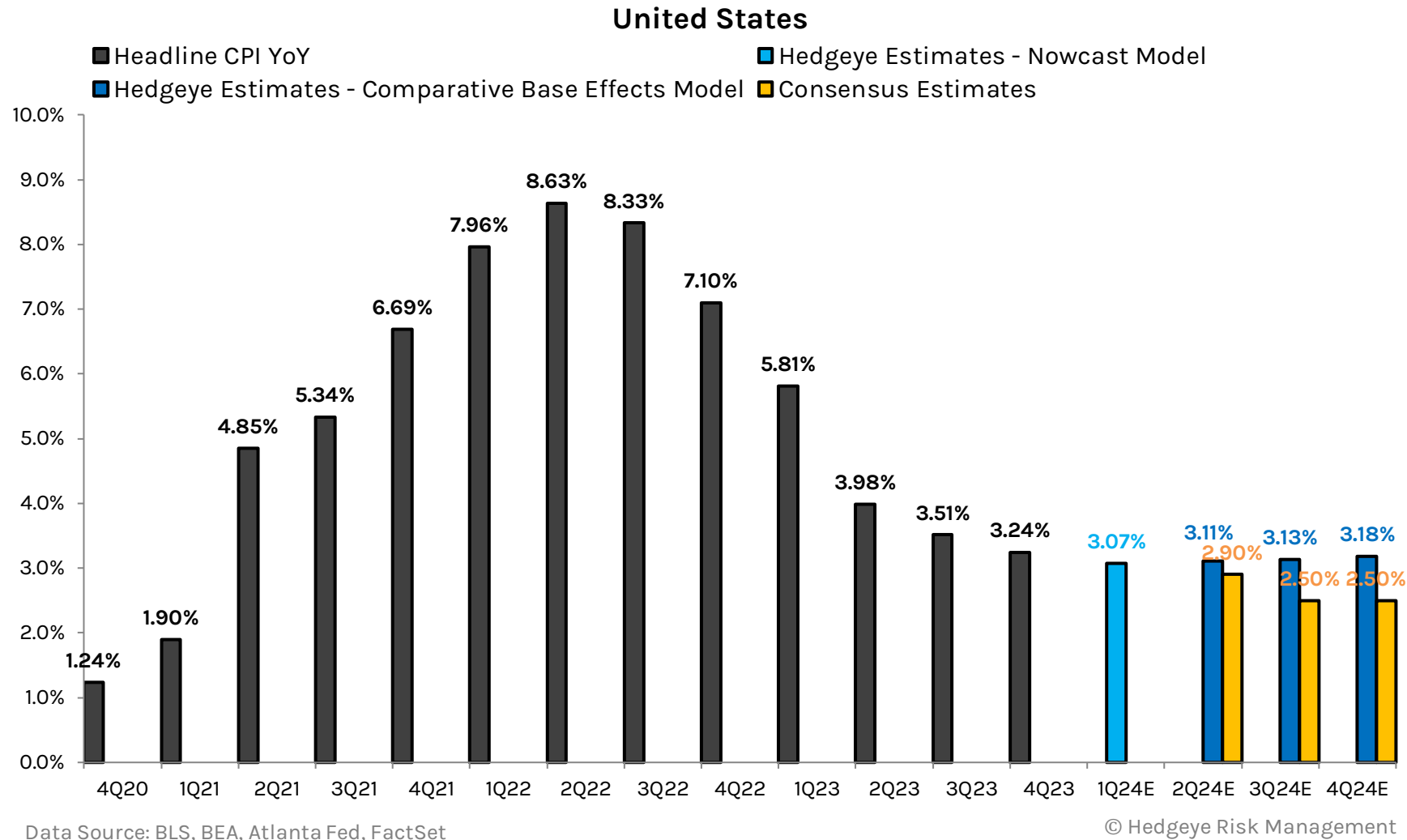


One differentiating factor of our forecasting process is that we aim to solve for where the economy is trending on a **Full Investing Cycle** basis, rather than trying to identify super short-term economic momentum.

Our rigorous study of financial market history suggests the latter to be little more than noise in the context of making accurate intermediate-to-long-term investment decisions.

As such, we are comfortable departing from the [perceived] “best” practices of economist consensus by interpolating our QoQ SAAR forecasts from our forecasted YoY growth rates. Macroeconomic Theory ≠ Macro Risk Management.

# US Headline CPI YoY Projections



We use two distinct models to forecast the YoY growth rate of Headline CPI and the combination of the two allows us to develop both a highly accurate real-time assessment of near-term inflation momentum, as well as a high-probability scenario for where inflation is likely to trend over the NTM.

Intra-quarter, we employ a stochastic nowcasting framework that anchors on nonlinear interpolation to relay rate of change signals from the individual features of the dynamic factor model to the base rate. In out-quarters where high-frequency data has yet to be reported, we employ a Bayesian Inference process that adjusts each of the preceding forecasted base rates inversely and proportionally to changes in the base effects.

**All told, our US CPI nowcast model has an average absolute forecast error of 36bps and an 85% success rate in terms of accurately projecting the rate of change of INFLATION.**

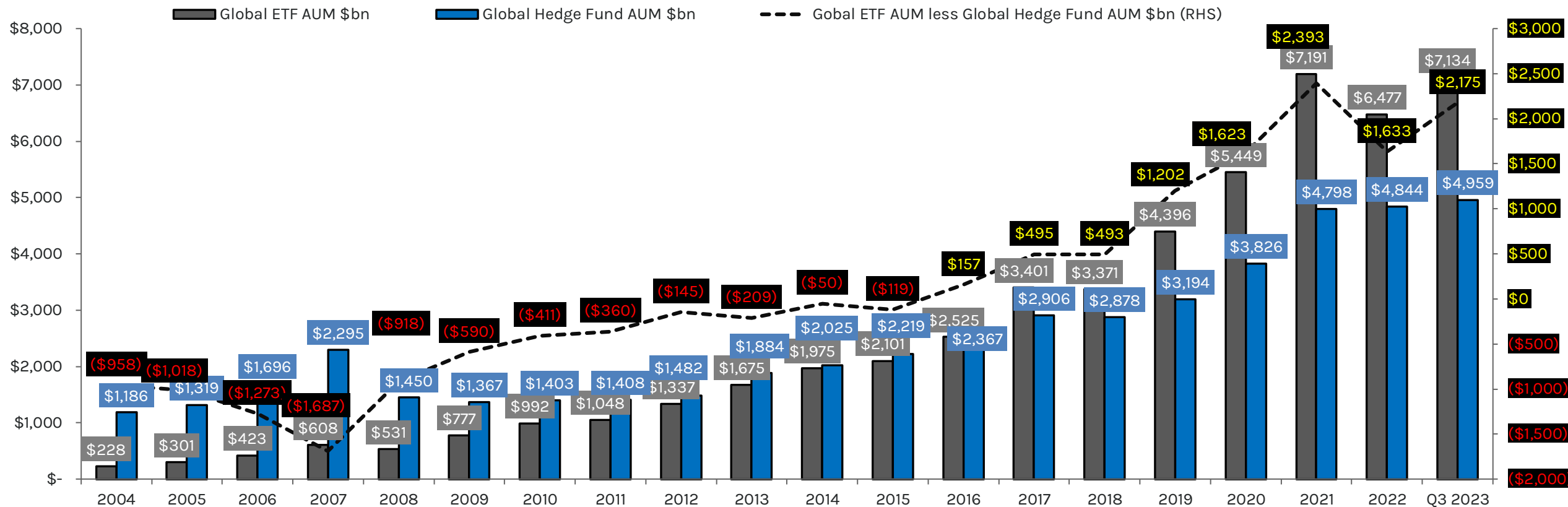
# OUR MACRO PROCESS





# The Investment Landscape Has Evolved Tremendously

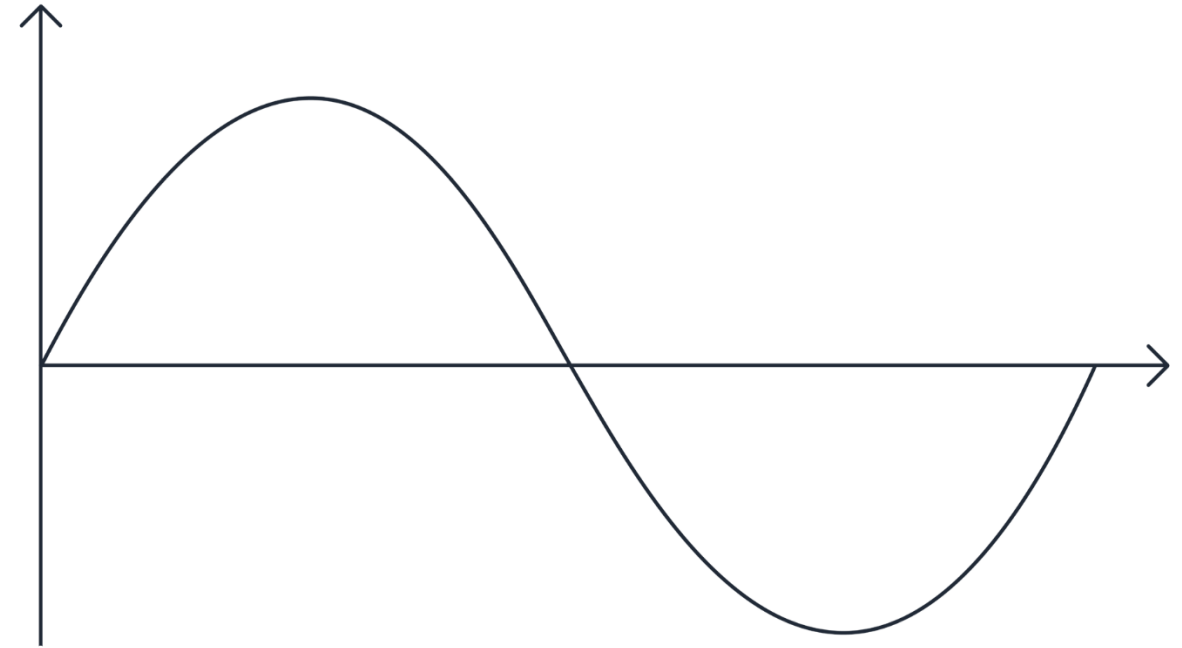
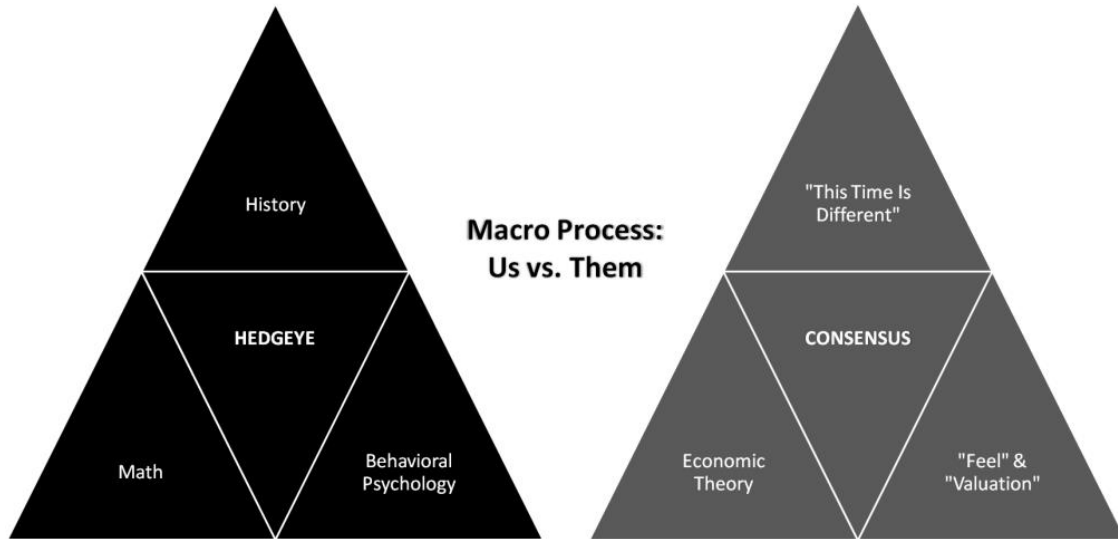
Stock-picking has given way to factor-picking and it's our job as investors to embrace this sea change, rather than fight it.



## Skate To Where The Puck Is Going Within Asset Management

AUM in listed ETFs surpassed \$7 trillion globally as of Q3 2023, topping global hedge fund assets by over \$2.1 trillion. Moreover, since 2015 ETF AUM has increased 240% with net assets from Hedge funds to ETFs increasing 1,285% since 2016. The proliferation of factor-based index investing and the concentration of hedge fund AUM at market-neutral platforms has made financial markets more sensitive to Macro risks than ever before. For example, JPM estimates systematic trading accounts for over 90% of US equity trading volume. Are your research and risk management processes equipped to compete for alpha in this new regime?

# ... So We Evolved Alongside It



## WE ARE DIFFERENTIATED FROM THE HERD

**Macroeconomic Research** and **Macro Risk Management** are two very different fields. We specialize in the latter, incorporating key lessons from behavioral finance such as Prospect Theory and Bayesian Inference into our analysis. **We don't "feel" anything with regards to the markets or the economy; if we can't contextualize it with math, we don't have a view on it.**

## ...BECAUSE WE FOCUS ON THE FACTS

**Rate of change** accelerations and decelerations are facts, not opinions, and our process is focused on contextualizing these facts, rather opining on the validity of **absolute levels** of growth, inflation, and/or policy. **This focus helps us consistently spot inflections in the performance of key factor exposures, across asset classes, 3-6 months ahead of investor consensus.**



# Highest/Lowest Expected Values By Quad Regime

## Quad 1: Goldilocks

### Best Asset Classes:

Equities, Credit, Commodities, FX

### Worst Asset Classes:

Fixed Income, USD

### Best Equity Sectors:

Tech, Consumer Discretionary, Materials, Industrials, Telecom

### Worst Equity Sectors:

Utilities, REITS, Consumer Staples, Financials, Energy

### Best Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Mid Caps

### Worst Equity Style Factors:

Low Beta, Defensives, Value, Dividend Yield, Small Caps

### Best Fixed Income Sectors:

BDCs, Convertibles, HY Credit, EM \$ Debt, Leveraged Loans

### Worst Fixed Income Sectors:

TIPS, Short Duration Treasuries, MBS, Treasury Belly, Long Bond

## Quad 2: Reflation

### Best Asset Classes:

Commodities, Equities, Credit, FX

### Worst Asset Classes:

Fixed Income, USD

### Best Equity Sectors:

Tech, Consumer Discretionary, Industrials, Energy, Financials

### Worst Equity Sectors:

Telecom, Utilities, REITS, Consumer Staples, Health Care

### Best Equity Style Factors:

Secular Growth, High Beta, Small Caps, Cyclical Growth, Momentum

### Worst Equity Style Factors:

Low Beta, Dividend Yield, Value, Defensives, Size

### Best Fixed Income Sectors:

Convertibles, BDCs, Preferreds, Leveraged Loans, HY Credit

### Worst Fixed Income Sectors:

Long Bond, Treasury Belly, Munis, MBS, IG Credit

## Quad 3: Stagflation

### Best Asset Classes:

Gold, Commodities, Fixed Income

### Worst Asset Classes:

Credit

### Best Equity Sectors:

Utilities, Tech, Energy, Industrials, Consumer Discretionary

### Worst Equity Sectors:

Financials, REITS, Materials, Telecom, Consumer Staples

### Best Equity Style Factors:

Secular Growth, Momentum, Mid Caps, Low Beta, Quality

### Worst Equity Style Factors:

Small Caps, Dividend Yield, Value, Defensives, Size

### Best Fixed Income Sectors:

Munis, EM \$ Debt, Long Bond, TIPS, Treasury Belly

### Worst Fixed Income Sectors:

BDCs, Preferreds, Convertibles, Leveraged Loans, HY Credit

## Quad 4: Deflation

### Best Asset Classes:

Fixed Income, Gold, USD

### Worst Asset Classes:

Commodities, Equities, Credit, FX

### Best Equity Sectors:

Consumer Staples, Utilities, REITS, Health Care, Telecom

### Worst Equity Sectors:

Energy, Tech, Industrials, Financials, Materials

### Best Equity Style Factors:

Low Beta, Dividend Yield, Quality, Defensives, Value

### Worst Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Cyclical Growth

### Best Fixed Income Sectors:

Long Bond, Treasury Belly, IG Credit, Munis, MBS

### Worst Fixed Income Sectors:

Preferreds, EM Local Currency, BDCs, Leveraged Loans, TIPS

# The Quads Provide A Reliable Starting Point For Asset Allocation And Keith's Quantitative Signaling Overlay Confirms Market Direction And Helps Risk Manage Core Exposures



Core to the process of selecting our core exposures is determining whether the ticker screens well from the perspective of Keith's proprietary risk management process, which employs PRICE, VOLUME and VOLATILITY as discrete factors in the calculus of levels that backtest well as critical momentum thresholds.

Assets where last price is greater than all three (in ascending order) are said to be in a "Bullish Formation" and all dips should be bought, insomuch that assets in the converse "Bearish Formation" should be repeatedly shorted on strength.

# A | B Testing Process: Quantify Investor Consensus

Monitoring Sector and Style factor Performance allows us to quantitatively track the evolution of our Macro Themes. Additionally, MEASURING and MAPPING key data sets within the CFTC COT report removes the qualitative guesswork from the process of tracking and ultimately FADING crowded positioning.

## STYLE FACTOR PERFORMANCE\*

	1D	1W	1M	3M	6M	YTD	
FACTOR	% Chg	% Chg	% Chg	% Chg	% Chg	% Chg	
Debt	High Debt/EV	0.4%	0.7%	-0.8%	17.5%	-1.0%	-0.8%
	Low Debt/EV	0.1%	1.2%	5.3%	24.7%	10.9%	5.3%
SI	High Short Interest	0.1%	0.4%	-0.1%	21.2%	-1.3%	-0.1%
	Low Short Interest	0.4%	1.9%	6.8%	20.3%	11.9%	6.8%
BETA	High Beta	-0.1%	0.7%	2.9%	30.9%	7.3%	2.9%
	Low Beta	0.5%	1.6%	3.1%	9.8%	3.3%	3.1%
YIELD	High Yield	0.2%	0.7%	-3.1%	10.9%	-5.0%	-3.1%
	Low Yield	0.2%	1.1%	4.8%	27.5%	9.4%	4.8%
MKT CAP	MCAP Bottom 25%	0.1%	0.3%	-1.3%	17.5%	-2.9%	-1.3%
	MCAP Top 25%	0.2%	1.5%	6.2%	22.2%	13.2%	6.2%
Sales	Top 25% Sales Growth	-0.1%	0.9%	4.0%	25.9%	11.0%	4.0%
	Bottom 25% Sales Growth	0.4%	1.4%	-0.6%	12.8%	-1.9%	-0.6%
EPS	Top 25% EPS Growth	-0.3%	0.3%	0.8%	22.1%	3.9%	0.8%
	Bottom 25% EPS Growth	0.3%	1.5%	0.3%	12.4%	0.1%	0.3%

\*Mean Performance of Top Quartile vs. Bottom Quartile, S&P500 Companies

## CFTC NON-COMMERCIAL NET LONG POSITIONING

METRIC	Latest	W/W Chg	3M Ave	6M Ave	1Y Ave	3Y		Z-Score		
						Max	Min	1Y	3Y	
EQUITIES	SPX (Index + E-mini)	(220,337)	(18,694)	(168,577)	(126,571)	(194,318)	248,601	(447,046)	-0.24X	-0.95X
	VIX	(39,071)	11,895	(47,125)	(40,036)	(47,543)	(13,979)	(139,038)	0.57X	1.08X
	Russell 2000 (mini)	(23,671)	483	(19,294)	(39,806)	(49,500)	21,422	(120,386)	1.13X	1.02X
	Dow Jones (mini)	16,731	(3,638)	12,247	(7,581)	(11,862)	24,410	(37,076)	1.58X	2.28X
	Nasdaq (mini)	28,775	(4,942)	28,833	19,681	12,602	41,791	(24,622)	1.05X	1.35X
	Nikkei Index	(3,720)	(332)	(3,096)	(2,189)	(2,794)	2,324	(9,401)	-0.49X	-0.30X
RATES	10Y UST	(683,550)	63,079	(720,302)	(705,115)	(702,613)	238,882	(870,838)	0.22X	-1.11X
	2Y UST	(1,114,920)	76,367	(1,273,073)	(1,297,353)	(1,072,965)	86,786	(1,476,201)	-0.14X	-1.32X
	5Y UST	(1,279,563)	56,309	(1,305,037)	(1,262,733)	(1,117,875)	117,022	(1,506,938)	-0.70X	-1.59X
	UST Bonds	(86,845)	19,087	(122,690)	(145,077)	(136,720)	49,853	(229,064)	1.21X	0.15X
	30D Fed Funds	(162,530)	(20,549)	(128,857)	(161,176)	(152,424)	147,168	(320,917)	-0.16X	-0.73X
CURRENCIES	USD	1,509	(456)	5,936	10,669	10,795	44,971	(10,137)	-1.44X	-1.39X
	JPY	(122,856)	(8,074)	(84,412)	(96,792)	(90,974)	12,444	(129,984)	-1.47X	-1.79X
	EUR	70,211	19,863	108,059	104,868	137,704	198,934	(47,358)	-1.69X	-0.11X
	GBP	44,907	(3,745)	22,756	11,655	14,611	66,045	(79,646)	1.06X	1.54X
	AUD	(81,966)	(2,391)	(57,773)	(68,608)	(56,752)	11,168	(98,824)	-1.41X	-1.26X
	CAD	(2,432)	4,963	(26,266)	(36,997)	(33,567)	50,344	(72,137)	1.38X	0.30X
	MXN	95,929	(4,525)	83,707	68,924	68,001	100,454	(64,080)	1.04X	1.71X
	NZD	6,626	3,219	(4,132)	(8,512)	(5,209)	17,126	(21,272)	1.74X	1.04X
CHF	(11,236)	(3,629)	(9,023)	(11,160)	(7,980)	13,895	(20,263)	-0.59X	-0.55X	
COMMODITIES	CRUDE OIL	209,149	15,484	203,660	263,161	249,523	594,465	170,119	-0.69X	-1.22X
	GOLD	64,348	17,948	103,226	82,784	92,850	175,694	(41,300)	-0.71X	-0.32X
	COPPER	(17,646)	15,929	(9,881)	(13,249)	(13,026)	66,522	(35,712)	-0.39X	-0.90X
	Natural Gas	(158,153)	(17,807)	(105,025)	(96,795)	(110,196)	17,500	(182,100)	-1.67X	-1.04X
	RBOB Gasoline	63,285	(2,954)	69,554	58,024	54,637	76,197	27,945	0.75X	1.21X
	ULSD Heating Oil	19,096	(2,113)	26,332	31,181	24,196	43,514	(14,002)	-0.46X	0.06X
	Silver	19,375	12,031	23,230	20,880	19,877	54,034	(12,811)	-0.05X	-0.28X
	Platinum	8,298	7,681	13,312	9,894	12,784	32,928	(8,246)	-0.48X	-0.42X
	Corn	(274,738)	(17,414)	(195,255)	(152,517)	(68,664)	526,059	(274,738)	-1.94X	-2.19X
	Soybeans	(153,468)	1,063	(56,809)	(5,759)	44,911	214,132	(155,559)	-2.41X	-3.38X
	Wheat	(46,046)	(14,803)	(48,909)	(61,308)	(65,284)	42,229	(107,489)	0.87X	-0.65X
	Live Cattle	78,449	9,877	47,810	73,201	99,799	144,819	30,899	-0.58X	-0.25X
	Lean Hogs	62,841	16,522	15,582	18,471	8,788	101,947	(29,164)	2.26X	0.56X
	Sugar	70,315	(8,553)	71,535	139,417	172,151	301,889	(9,197)	-1.54X	-1.41X
	Cotton	97,442	13,172	31,902	37,126	24,897	127,919	(13,367)	2.73X	1.16X
	Coffee	53,560	(4,429)	47,415	23,079	17,699	72,005	(37,467)	1.45X	0.83X
	Cocoa	39,319	(3,580)	60,146	67,099	64,511	86,695	(32,129)	-1.90X	0.36X
Orange Juice	2,041	739	1,546	2,435	3,181	6,673	(2,109)	-0.97X	-0.55X	

# A | B Testing Process: Measure & Map The Volatility of Volatility

Deliberately studying the VOLATILITY OF VOLATILITY leads to high-probability decision-making opportunities. TIMING matters.

TIME WINDOW SETTING: VOLATILITY_30D PUT_IMP_VOL_30D		TOTAL RETURN PERFORMANCE YTD %	IVOL PREMIUM/DISCOUNT IVOL PREM % IVOL / RVOL					REALIZED VOLATILITY TRENDS			IMPLIED VOLATILITY TRENDS	
TICKER			Yesterday	1W Ago	1M Ago	TTM Z-Score	3Yr Z-Score	MM %	PERCENTILE 10YR	MM %	PERCENTILE 10YR	
<b>US EQUITIES</b>												
CURRENT												
SPDR S&P 500 ETF Trust	SPY	6.85%	19%	26%	30%	38%	-1.2	-0.5	20%	49%	2%	19%
Power Shares QQQ Trust ETF	QQQ	6.66%	12%	20%	25%	36%	-1.1	-0.4	21%	51%	0%	36%
I-Shares Russell 2000 ETF	IWM	-0.41%	-9%	-3%	3%	-3%	-1.1	-1.3	7%	79%	1%	54%
Materials Sector SPDR ETF	XLB	1.51%	31%	17%	-9%	129%	-0.2	0.0	33%	49%	-24%	62%
Communication Services SPDR ETF	XLC	9.72%	-12%	-12%	-12%	49%	-0.9	-0.7	75%	50%	3%	27%
Energy Sector SPDR ETF	XLE	2.53%	11%	14%	22%	23%	-0.4	-0.2	-7%	32%	-16%	28%
Financials Sector SPDR ETF	XLF	7.18%	47%	49%	42%	47%	0.3	0.8	2%	15%	2%	21%
Industrials Sector SPDR ETF	XLI	5.47%	38%	17%	13%	62%	0.2	0.4	2%	32%	-13%	56%
Technology Sector SPDR ETF	XLK	6.66%	-26%	-19%	2%	10%	-1.9	-1.3	14%	62%	-23%	27%
Consumer Staples Sector SPDR ETF	XLP	3.82%	152%	0%	16%	-1%	3.4	2.4	-1%	51%	152%	95%
Real Estate Sector SPDR ETF	XLRE	-3.34%	-5%	-1%	2%	-3%	-0.6	-0.5	-2%	57%	-4%	50%
Utilities Sector SPDR ETF	XLU	-2.16%	-10%	-15%	-3%	5%	-0.6	-0.8	6%	69%	-9%	53%
Health Care Sector SPDR ETF	XLV	8.42%	18%	38%	1%	64%	-0.2	-0.1	-14%	10%	-38%	7%
Consumer Discretionary Sector SPDR ETF	XLY	1.39%	-6%	-3%	-27%	14%	-0.8	-0.5	18%	59%	-3%	51%
Retail SPDR ETF	XRT	3.19%	13%	19%	19%	5%	-0.8	-0.5	-6%	54%	1%	49%
<b>INTERNATIONAL EQUITIES</b>												
I-Shares MSCI Emerging Markets ETF	EEM	0.97%	-6%	-9%	-9%	-23%	-0.5	-0.5	-16%	34%	4%	18%
Euro Stoxx 50 Index	SX5E Index	7.77%	-2%	-5%	0%	2%	-0.5	-0.4	-1%	20%	-5%	7%
I-Shares China Large-Cap ETF	FXI	0.37%	-12%	-8%	-4%	-14%	-1.2	-0.7	-1%	88%	1%	80%
I-Shares MSCI Japan ETF	EWJ	7.59%	29%	27%	22%	8%	1.5	1.5	-21%	25%	-6%	41%
<b>CURRENCIES</b>												
PowerShares US Dollar Index ETF	UUP	3.51%	129%	190%	42%	-54%	0.9	1.5	-72%	24%	37%	84%
Currency Shares Euro Trust ETF	FXE	-2.01%	20%	34%	-	-1%	0.2	0.5	-36%	11%	-22%	16%
Currency Shares British Pound ETF	FXB	-0.67%	4%	6%	4%	-13%	0.2	0.1	-31%	7%	-18%	4%
Currency Shares Japanese Yen ETF	FXJ	-6.47%	-20%	-5%	-18%	-15%	-1.1	-1.0	-9%	62%	-15%	32%
<b>COMMODITIES</b>												
SPDR Gold Shares ETF	GLD	-1.33%	8%	6%	6%	-7%	-0.1	-0.3	-13%	22%	1%	15%
United States Oil Fund ETF	USO	7.91%	31%	27%	13%	27%	0.6	0.3	-11%	26%	-9%	9%
United States Natural Gas Fund ETF	UNG	-25.00%	-16%	-8%	-8%	18%	0.0	0.0	2%	93%	-27%	57%
Teucrium Corn ETF	CORN	-12.38%	61%	58%	57%	43%	1.7	1.4	4%	16%	17%	41%
TEUCRIUM SOYBEAN FUND	SOYB	-10.96%	28%	26%	39%	57%	0.3	0.4	15%	39%	-6%	29%
VANECK STEEL ETF	SLX	-4.16%	35%	38%	41%	18%	0.5	1.0	10%	11%	26%	23%
<b>FIXED INCOME</b>												
I-Shares 20+ Year Treasury Bond ETF	TLT	-5.07%	-8%	-2%	-4%	-6%	-0.6	-0.9	1%	70%	-1%	51%
I-Shares 7-10 Year Treasury Bond ETF	IEF	-2.44%	-5%	1%	-1%	3%	-0.7	-0.9	14%	82%	5%	61%
I-Shares IBOXX IG Corporate Bond ETF	LQD	-2.35%	31%	29%	11%	17%	1.0	0.1	-8%	76%	3%	66%
I-Shares J.P. Morgan USD EM Bond ETF	EMB	-1.02%	-8%	68%	5%	14%	-1.0	-1.1	4%	77%	-16%	15%
I-Shares IBOXX HY Corporate Bond ETF	HYG	-0.05%	99%	-10%	8%	15%	4.9	3.1	9%	47%	88%	85%
<b>MEGA-CAP</b>												
Apple	AAPL	-5.20%	27%	29%	23%	23%	-0.3	0.2	-12%	19%	-9%	14%
Amazon	AMZN	15.17%	-7%	-5%	-9%	86%	-0.8	-0.5	59%	56%	-20%	40%
Alphabet	GOOGL	3.06%	-17%	-13%	-16%	84%	-0.9	-0.9	75%	67%	-21%	44%
Facebook	META	36.75%	-46%	-45%	-44%	92%	-1.8	-1.5	192%	92%	-18%	45%
Microsoft	MSFT	9.12%	16%	18%	20%	96%	-0.2	0.0	38%	35%	-19%	32%
Tesla	TSLA	-22.74%	-12%	-11%	-10%	-7%	-1.0	-0.9	6%	59%	0%	29%

Data Source: CBOE, CME

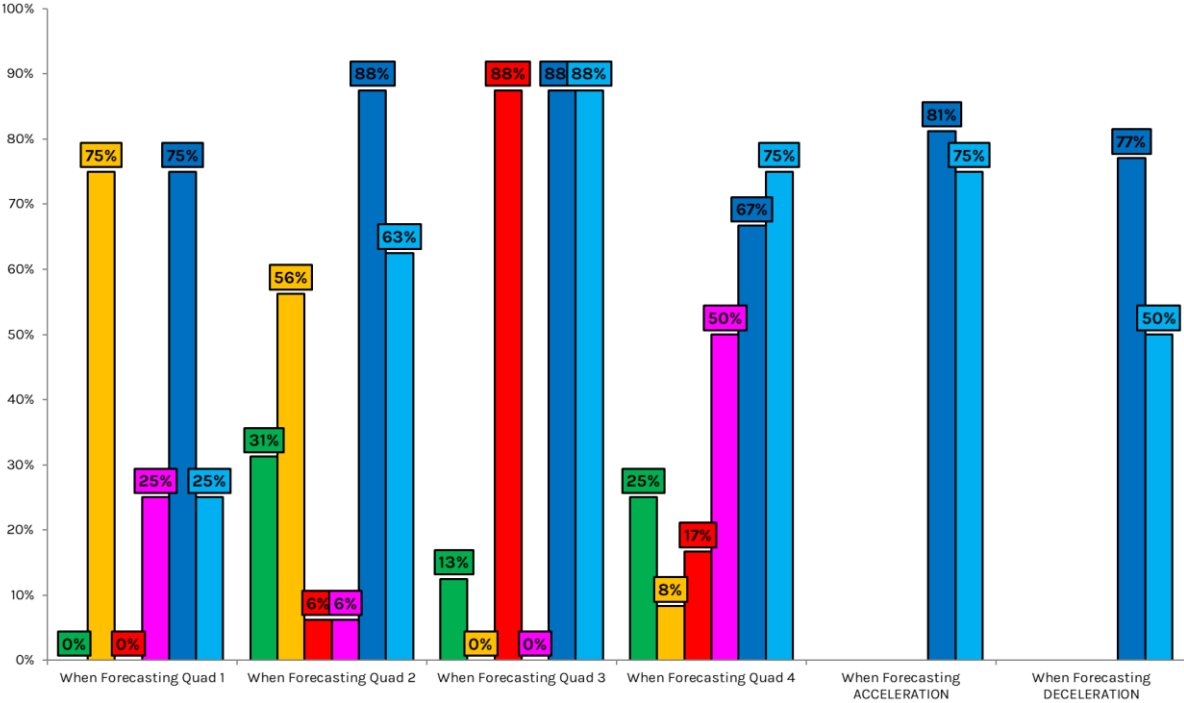
# Measuring And Mapping The Quads With Precision Ex Ante Matters To Driving Ex Post Returns

## US Comparative Base Effects Model Backtest

## US Nowcast Model Backtest

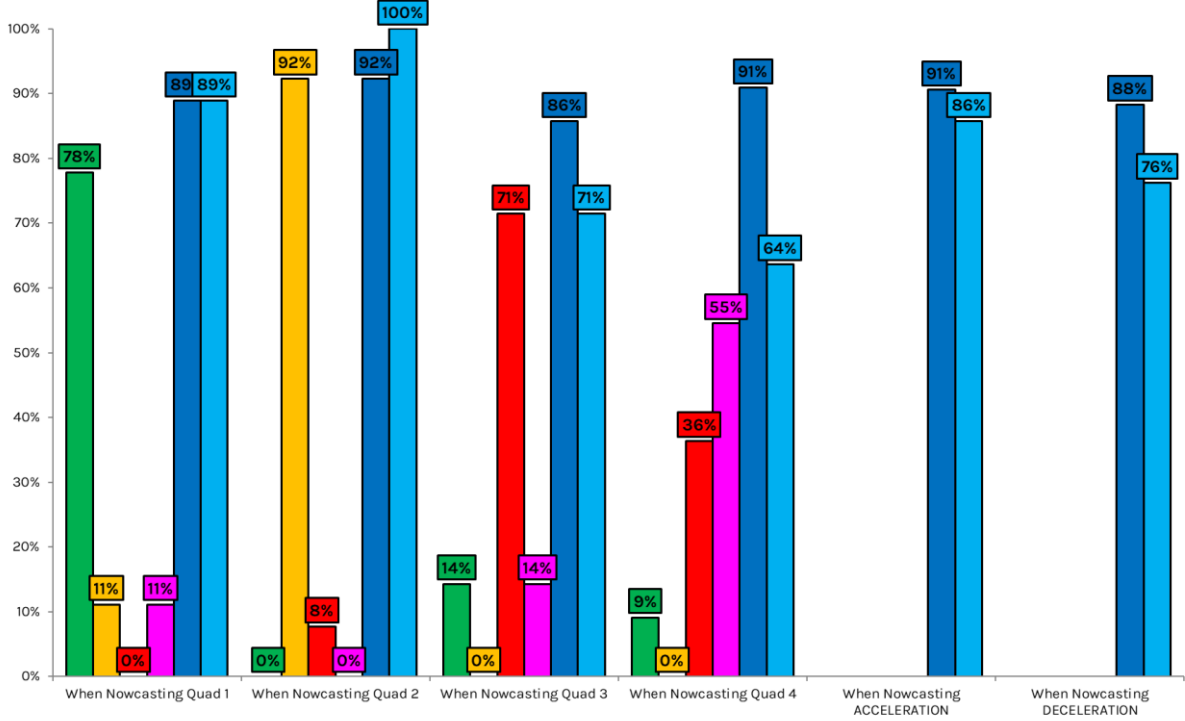
Hedgeye Comparative Base Effects Model Quad Projection Accuracy: United States

■ 1 ■ 2 ■ 3 ■ 4 ■ GDP Δ Accuracy ■ CPI Δ Accuracy



Hedgeye Nowcast Model Quad Projection Accuracy: United States

■ 1 ■ 2 ■ 3 ■ 4 ■ GDP Δ Accuracy ■ CPI Δ Accuracy





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